The effect of perceived mobility necessity in the choice of departure time

Departure time choice plays a crucial role in addressing the problem of urban congestion. Since the work of Small (1982), many studies have shown that travelers trade-off between travel time and scheduling delay and that travel time variability also plays an important role because uncertainty is likely to affect the choice of departure time. However, departure time choice is also related to the full daily activity pattern, such as a restriction or a preference in one activity may form restrictions in the flexibility of other activities and thereby affect the preference for the related departure time. In this paper we investigate how the latent effect of the perceived mobility necessities affects the choice of departure time. A stated choice experiment collected among workers who commute to Copenhagen center is used to estimate 9 hybrid choice models where the discrete choice of departing before or later than the current trip depends on the latent construct of the perceived mobility necessities. Results show that individuals who perceive they have high mobility necessity tend to prefer the current departure time, and in particular dislike departing later. However, the latent variables account also partially for panel effect across choice tasks.

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